

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In Re Application of:	Joung et al.	Docket No.:	2003P07969 US
Serial No.:	10/627,844	Confirmation No.:	2648
Filing Date:	7/25/2003	Examiner:	MALEVIC, DJURA
Customer No.:	26474	Art Unit:	2884

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For: Registered collimator device for nuclear imaging camera and method of forming the same

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Honorable Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

REPLY BRIEF TO EXAMINER'S ANSWER

Sir:

This is a Reply Brief in response to the Examiner's Answer mailed on September 30, 2009. Claims 1 – 28 are currently pending and are the subject of this appeal.

Claims 1-7, 10-16, 19-25, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application 2002/0175289 to Soluri *et al.* ("Soluri") in view of U.S. Patent 5,099,134 to Hase *et al.* ("Hase") and U.S. Patent 4,725,734 to Nishiki. In the Examiner's Answer, the Examiner asserts that:

With regards to claims 1, 10, 19 and 28, Soluri discloses a scintigraphic device (Figures 1-8), comprising: a collimator device 1 including a grid of collimation square holes (figure 2) formed by a plurality of sheets arranged in a grid pattern [0037]; and pixilated scintillators 20 individually located in each of said collimation square holes; and a detector 3 coupled to said pixilated scintillators and operable to detect radiation emanating from an object and interacting with said scintillators after passing through said collimator device [0031 – 0032].

Soluri fails to expressly disclose the method and/or the specifics of producing the collimator, for example, each of said sheets having evenly spaced slots into which other sheets are inserted. Hase shows that a collimator having plates with a number of through holes formed side by side, each hole for guiding and inserting a plurality of plates is known (Figures 1, 2, 6, 11 and 14). Hase further teaches that the method of making such a collimator improves sensitivity, resolution and manufacturing yields (Col. 1, Lines 45-52). In view of the utility in containing a collimator with such characteristics, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to specify that the collimator disclosed in Soluri be made such as that taught be Hase.

*Examiner's Answer*, pp. 4-5.

The applied art does not teach or suggest "A collimator device for a nuclear imaging camera, comprising: a grid of collimation square holes formed by a plurality of sheets arranged in a grid pattern, each of said sheets having evenly spaced slots into which other sheets are inserted; optically reflecting material coating at least a portion of the surfaces of said sheets forming said grid of said collimation square holes; and pixellated scintillators individually located in each of said collimation square holes" as recited in claim 1 of the present application" as recited in claim 1 of the present application and similarly recited in the other independent claims. (Emphasis added).

The Office Action is attempting to take teachings relating to a fan-beam focusing collimator which functions to focus radiation in a converging manner onto a scintillation crystal (note fan-beam focusing slits 3, Fig. 1) and applying them to a collimator for a scintillator which was made by machining and drilling holes from a block of material.

Further, Hase does not place any pixilated scintillators into the collimation holes but rather requires a transparent bottom element. The Examiner is attempting to take the “angled” or focused grid of Hase and applying such a grid to Soluri. However, by doing this, the Examiner is not viewing the claimed invention as a whole. In determining the differences between the prior art and the claims, the question under 35 U.S.C. §103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). Distilling an invention down to the “gist” or “thrust” of the invention disregards the requirements of analyzing the subject matter “as a whole.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). When looking at Hase as a whole, Hase does not teach or suggest “a grid of collimation square holes formed by a plurality of sheets arranged in a grid pattern, each of said sheets having evenly spaced slots into which other sheets are inserted” as recited in claim 1 of the present application and similarly recited in the other independent claims. Hase does not teach or suggest a grid of collimation square holes.

Moreover, one of ordinary skill in the art would not be motivated to combine the teachings of Hase and Soluri. The Examiner attempts to rely on Hase for the motivation. Specifically, the Examiner’s Answer recites that:

The stated motivation provided by Hase was that Hase’s method provides high resolution and improves manufacturing yield. Applicant states the said motivations are broad and general. Applicant further argues that the examiner reconstructed applicants’ claims only upon hindsight. The examiner respectfully disagrees.

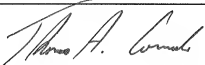
To start, a broad and general reason is a reason nonetheless. In this instance, applicant has already acknowledged that Soluri fabrication of the collimator is cumbersome in previous arguments. Thus, a need for a different technique for fabricating a collimator would be appreciated and known and different method for fabricating a collimator. Hase teaches that his method provides high resolution and improves manufacturing yield which yields a predictable result while providing a proper motivation.”

*Examiner’s Answer*, pp. 6-7. One of ordinary skill in the art would not have been motivated by Hase to modify the miniaturized scintigraphic device as proposed by the Examiner. In this regard, Applicants’ argument is not that the features of one reference may not be bodily incorporated into the other reference, but that no combination of Soluri

with Hase would be obvious to one of ordinary skill in the art of the invention. Hase teaches the requirement of a box frame 13 as shown in Figure 5, with walls 9 and transparent bottom frame element 12, as a necessary structural requirement of the disclosed collimator. Therefore, the collimator of Hase is intended to be used, and in fact must be used, with a scintillation crystal slab. There is no suggestion or teaching in Hase of any other use of the disclosed collimator. The alleged “teaching” of Hase to improve the manufacturing yield of a conventional mass-produced collimator does not provide the requisite suggestion in the art to modify the specialized, miniaturized device disclosed by Soluri. Improvement in manufacturing yield of a mass-produced collimator simply does not suggest making any modifications to a niche product as disclosed by Soluri. A manufacturer of the Soluri device would not be anxious about improving manufacturing yield as the Soluri device does not have the mass demand of a conventional-use collimator as disclosed by Hase. Thus, one of ordinary skill in the art at the time of the invention would be motivated to combine the teachings of Hase with the Soluri device.

**Conclusion**

For the foregoing reasons, the Examiner has failed to refute Appellant's assertions with respect to the rejections. Therefore, the Examiner's conclusions in rejecting the claims of the present application should be reversed, and such action is earnestly solicited.

RESPECTFULLY SUBMITTED,					
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